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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/522,127	01/24/2005	Toshiyuki Wada	2005_0081A	1946

52349 7590 07/31/2007
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EXAMINER

LIANG, LEONARD S

ART UNIT	PAPER NUMBER
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2853

MAIL DATE	DELIVERY MODE
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07/31/2007

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/522,127	WADA ET AL.	
	Examiner	Art Unit	
	Leonard S. Liang	2853	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 30 April 2007.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-26 is/are pending in the application.
- 4a) Of the above claim(s) 2-15 and 17-26 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1 and 16 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 24 January 2005 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

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Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date <u>01/24/05</u> | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Election/Restrictions

In the response to election/restriction filed on 04/30/07, the applicant elected Group I, Species I directed to claims 1 and 16. Therefore, these claims will herein be examined and all other claims will be withdrawn from consideration.

Specification and Drawings

Applicant is reminded of the proper language and format for an abstract of the disclosure.

The abstract should be in narrative form and generally limited to a single paragraph on a separate sheet within the range of 50 to 150 words. It is important that the abstract not exceed 150 words in length since the space provided for the abstract on the computer tape used by the printer is limited. The form and legal phraseology often used in patent claims, such as "means" and "said," should be avoided. The abstract should describe the disclosure sufficiently to assist readers in deciding whether there is a need for consulting the full patent text for details.

The language should be clear and concise and should not repeat information given in the title. It should avoid using phrases which can be implied, such as, "The disclosure concerns," "The disclosure defined by this invention," "The disclosure describes," etc.

The abstract of the disclosure is objected to because the abstract appears to be more than one paragraph. Correction is required. See MPEP § 608.01(b).

The lengthy specification and drawings have not been checked to the extent necessary to determine the presence of all possible minor errors. Applicant's cooperation is requested in correcting any errors of which applicant may become aware in the specification and drawings. Specifically, the applicant is requested to match all references in the drawings to the references in the specification and drawings.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1 and 16 are rejected under 35 U.S.C. 103(a) as being unpatentable over Asano et al (JP Pat 2000-318141) in view of Matsumoto et al (US Pat 6523948) and Takei et al (US Pat 5841456).

Asano et al discloses:

- {claim 1} An image recording apparatus (figure 10); an image forming medium which extends over at least one platen and comprises an image receiving layer (figure 10, reference 20); an image recording section having at least one ink-jet head which faces the image receiving layer of the image forming medium on an outer periphery of one platen of the at least one platen (figure 10, reference 11a-d); an image transfer section having an image receiver and an image transfer heat medium which faces the image forming medium in its back side (figure 12, reference 11e and 11f), wherein the image forming medium comprises a laminate (abstract).

Asano et al differs from the claimed invention in that it does not disclose the ink jet head of figure 10 and the image transfer section using thermal head of figure 12 are usable together.

Matsumoto et al discloses an ink jet head and thermal head usable in the same system (figure 1, reference 22-23).

It would have been obvious to one having ordinary skill in the art at the time the invention was made to incorporate the teachings of Matsumoto et al into the invention of Asano et al, so that both an thermal head and an ink jet head are printing on a transfer belt 20. The motivation for the skilled artisan in doing so is to gain the benefit of dynamic transfer performance for a transfer belt.

Furthermore, Asano et al differs from the claimed invention in that it does not disclose:

- {claim 1} wherein the image forming medium comprises a laminate of an aqueous solvent permeating layer and the image receiving layer which are laminated on and in the above listed order from a substrate for the image forming medium
- {claim 16} the image receiver comprises cellulose paper of which at least one main surface is laminated with a polyethylene

Takei et al discloses:

- {claim 1} wherein the image forming medium comprises a laminate of an aqueous solvent permeating layer and the image receiving layer which are laminated on and in the above listed order from a substrate for the image forming medium (column 3, lines 20-42; column 4, lines 25-35)
- {claim 16} the image receiver comprises cellulose paper of which at least one main surface is laminated with a polyethylene (column 3, lines 20-42; column 4, lines 25-35)

It would have been obvious to one having ordinary skill in the art at the time the invention was made to incorporate the teachings of Takei et al into the invention of Asano et al. The motivation for the skilled artisan in doing so is to gain the benefit of performing high-quality image recording using liquid ink that is free from mixing of adjacent different color dots or uneven mixing of superposed dots.

Conclusion

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Yamamoto et al (US Pat 6386697) discloses an image forming device including intermediate medium.

Neal et al (US Pat 5502476) discloses a method and apparatus for controlling phase-change ink temperature during a transfer printing process.

Deily et al (US Pat 6196675) discloses an apparatus and method for image fusing.

Hanson et al (US Pat 5796422) discloses direct toner projection printing using an intermediate transfer medium.

Dobashi et al (US Pat 5886727) discloses a thermal transfer printer and printing method therefor.

Salmon (US Pat 6309049) discloses a printing apparatus and method for imaging charged toner particles using direct writing methods.

Miyazaki (US Pat 6335140) discloses a thermal transfer material and printing method used with the same.

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Miyamoto (US Pat 6561645) discloses an image forming process and image forming apparatus.

Nakamura et al (US Pat 5049904) discloses a printer having identifiable interchangeable heads.

Taniuchi et al (US PgPub 20060152566) discloses an image forming method, image forming apparatus, intermediate transfer body, method of modifying surface of intermediate transfer body.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Leonard S. Liang whose telephone number is (571) 272-2148. The examiner can normally be reached on 8:30-5 Monday-Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Stephen Meier can be reached on (571) 272-2149. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

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STEPHEN MEIER
SUPERVISORY PATENT EXAMINER